

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-35. (Cancelled).

36. (Previously Presented) A semiconductor microvalve comprising:

a semiconductor substrate;

a flexible member isolated from said semiconductor substrate and displaced in response to temperature change;

a thermal isolation member placed between said semiconductor substrate and said flexible member and made of a resin for joining said semiconductor substrate and said flexible member; and

a moving element placed contiguous with the flexible member, said moving element being displaced relative to the semiconductor substrate when temperature of the flexible member changes;

a fluid element being joined to said semiconductor device and having a flow passage with a flowing fluid quantity changing in response to displacement of the moving element, and

wherein portions of said semiconductor substrate and said flexible member in contact with said thermal isolation member form comb teeth.

37. (Previously Presented) The semiconductor microvalve as claimed in claim 36, wherein said semiconductor device and said fluid element are joined via a spacer layer.

38. (Previously Presented) The semiconductor device as claimed in claim 36, wherein the material of which said thermal isolation member is made has a thermal conductivity coefficient of about 0.4 W/(m °C) or less.

39. (Previously Presented) The semiconductor device as claimed in claim 36, wherein the material of which said thermal isolation member is made is polyimide.

40. (Previously Presented) The semiconductor device as claimed in claim 36, wherein the material of which said thermal isolation member is made is a fluoridated resin.

41. (Previously Presented) The semiconductor device as claimed in claim 36, wherein a reinforcement layer made of a harder material than the material of which said thermal isolation member is made is provided on at least one face orthogonal to a thickness direction of said thermal isolation member.

42. (Previously Presented) The semiconductor device as claimed in claim 41, wherein the reinforcement layer has a Young's modulus of 9.8×10^9 N/m² or more.

43. (Previously Presented) The semiconductor device as claimed in claim 41, wherein the reinforcement layer is a silicon dioxide thin film.

44. (Cancelled)

45. (Previously Presented) The semiconductor device as claimed in claim 36, wherein the flexible member has a cantilever structure.

46. (Previously Presented) The semiconductor device as claimed in claim 36, wherein said moving element is supported by a plurality of flexible members.

47. (Previously Presented) The semiconductor device as claimed in claim 46, wherein the flexible members are in the shape of a cross with said moving element at the center.

48. (Previously Presented) The semiconductor device as claimed in claim 46, wherein displacement of said moving element includes displacement rotating in a horizontal direction to a substrate face of the semiconductor substrate.

49. (Previously Presented) The semiconductor device as claimed in claim 46, wherein the flexible members are four flexible members each shaped in L, the four flexible members being placed at equal intervals in every direction with said moving element at the center.

50. (Previously Presented) The semiconductor device as claimed in claim 36, wherein the flexible member is made up of at least two members having different thermal expansion coefficients and is displaced in response to a difference between the thermal expansion coefficients.

51. (Previously Presented) The semiconductor device as claimed in claim 50, wherein the flexible member includes a member made of silicon and a member made of aluminum.

52. (Previously Presented) The semiconductor device as claimed in claim 50, wherein the flexible member includes an member made of silicon and an member made of nickel.

53. (Previously Presented) The semiconductor device as claimed in claim 50, wherein at least one of the members making up the flexible member is made of the same material as the thermal isolation member.

54. (Previously Presented) The semiconductor device as claimed in claim 53, wherein the flexible member includes an member made of silicon and an member made of polyimide as the member made of the same material as the thermal isolation member.

55. (Previously Presented) The semiconductor device as claimed in claim 53, wherein the flexible member includes an member made of silicon and an member made of a fluoridated resin as the member made of the same material as the thermal isolation member.

56. (Previously Presented) The semiconductor device as claimed in claim 36, wherein the flexible member is made of a shape memory alloy.

57. (Previously Presented) The semiconductor device as claimed in claim 36, wherein a thermal isolation member made of a resin for joining the flexible member and said moving element is provided between the flexible member and said moving element.

58. (Previously Presented) The semiconductor device as claimed in claim 57, wherein rigidity of the thermal isolation member provided between the semiconductor

substrate and the flexible member is made different from that of the thermal isolation member provided between the flexible member and said moving element.

59. (Previously Presented) The semiconductor device as claimed in claim 36, wherein the flexible member contains a heater for heating the flexible member.

60. (Previously Presented) The semiconductor device as claimed in claim 59 further comprising:

wiring for supplying power to the heater for heating the flexible member is formed without the intervention of the thermal isolation member.

61.-68. (Cancelled)